AMSAT News Service Weekly Bulletins
Issue: ANS-304
Date: 2016-10-30
Sources: amsat-ans-2016-ans-304-weekly-hyperkitty-31f56df4f0.txt

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AMSAT NEWS SERVICE
ANS-304

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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SB SAT @ AMSAT $ANS-304.01
ANS-304 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 304.01
>From AMSAT HQ KENSINGTON, MD.
October 30, 2016
To All RADIO AMATEURS
BID: $ANS-304.01

SO-50 Experiences Terrestrial Interference in 2M Satellite Sub-Band

Recently communications through the SO-50 satellite, over North America, have been compromised due to a terrestrial station using 145.850 MHz, the uplink frequency for SO-50. The station appears to be located in the southeastern United States.

Amateur operators are reminded that the 145.800 MHz - 146.000 MHz segment of the two meter band is reserved for amateur satellite communications. Amateur stations should not be using this segment for simplex communications, repeater links, or Echolink/IRLP nodes due to the high likelihood of interference with amateur satellite operations.

[ANS thanks Paul N8HM for the above information]

ARISS-International Face to Face Meeting Agenda

AMSAT V.P. for Human Spaceflight Programs and ARISS International Chair Frank Bauer KA3HDO, recently announced via the AMSAT-BB stating that those who have expressed interest in the ARISS meeting previously have received the latest ARISS meeting information. He has also included a "near final" draft for the ARISS meeting in Houston. It can be downloaded at: http://tinyurl.com/ANS304-ARISS-I-Agenda

Frank goes on to say, "As you review this, I think you can see that we have some really exciting topics that we will be discussing and working through, as a team. Most importantly, we will be celebrating our 20th anniversary as a team. For those not aware, 20 years ago, in November 1996, an international group interested in installing and operating a ham radio station on the ISS met at the NASA Johnson Space Center in Houston and, per NASA's direction, formed an international working group called ARISS. And the rest is history!!

"Because we have so many things to address at our ARISS-I meeting, we have divided our discussions into 3 primary categories: 1) Hardware Development, 2) Education and 3) Sustainability and Funding. As you can see in the agenda, we will be conducting two sessions simultaneously like is done in a conference. We will also have plenary sessions, where the entire team will attend, to discuss topics that impact the entire, world-wide team.

"If you are still interested in attending the meeting, you are welcome to come. Please let me know (directly, KA3HDO (at) amsat.org) of your interest.

"I thank you all for your interest in and support to our magnificent program. It is amazing what we have accomplished in 20 years! It will be exciting to see what we will do in the next 20!!"

[ANS thanks Frank KA3HDO for the above information]

ARISS Twist Presented in National Geographic's Mars Prequel, "Before Mars"

National Geographic released the first trailer for the fall release of its ambitious new event series today, MARS. The hybrid, scripted docuseries will be a six-part story about colonizing the red planet.

The trailer begins with an appropriately moody narration by a woman over the image of an Earth, and as the camera pulls back, we see it’s a depiction of Earth on a spaceship named Daedalus, after the mythological Greek craftsman who created wings for his son, Icarus. As the CGI ship veers into the crimson orbit of Mars, their mission is revealed: to make the planet a new home.

MARS, which will premiere in November, is produced by Ron Howard and Brian Grazer’s Imagine Entertainment and RadicalMedia, and it will

be the centerpiece of Nat Geo's big media push. MARS will combine documentary sequences about real-life efforts to travel and colonize Mars, with a dramatized story in which two Asian-American astronauts venture to Mars in 2033.

A digital-only prequel series, Before Mars, will focus on the two astronauts before they ship off planet. Joon and Hana Seung are twin sisters who find themselves in a rural American town after relocating with their mother. One of the sisters finds a ham radio which allows her to befriend a female astronaut on the International Space Station. Before Mars will be directed by Lloyd Lee Choi, while MARS will be directed by Everado Gout.

There is currently no release date for the Before Mars prequel series.

The video can be viewed via YouTube at:
https://youtu.be/mPuTlZYDbh4

National Geographic has also published an article "A GUIDE TO HAM RADIO, Can Ham Radios Really Talk to Space? And Other Answers" by Patrick J. Kiger which can be veiwed at:
http://tinyurl.com/ANS304-NationalGeographic

[ANS thanks www.inverse.com and the National Geographic for the above information]

SDR Workshop in South Africa

Hans van de Groenendaal, ZS6AKV, says that the Software Defined Radio workshop on Saturday 26 November will get you going with SDR projects. The workshop hosted by AMSAT-SA in co-operation with the SARL features presentations on the SDR basics, and how to get started. Anton Janovsky ZR6AIC will demonstrate a SDR repeater he has developed using a dongle and a Raspberry Pi. Cor Rademeyer ZS6CR will talk about a SDR transponder for incorporation in a CubeSat. There will also be an update on the Kletskous project.

The cost is R20 for refreshments plus a donation to the Kletskous Development Fund. For the full programme and details of how to book visit www.amsatsa.org.za. Payment can be made in advance or in cash at the door. Please use the booking form to assist the organisers with venue and catering arrangements. The workshop starts with registration at 9 am, the programme starts at 09:30 and ends at 13:00.

[ANS thanks the SARL weekly news in English 2016-10-29 for the above information]

Announcing the 14th Annual CubeSat Developers' Workshop

The CubeSat Workshop Team is excited to announce that the 14th Annual CubeSat Developers' Workshop dates are set for April 26-28, 2017. The workshop will be held in a larger, improved location on Cal Poly's campus in San Luis Obispo, CA.

Abstract Submission for presentations is now OPEN! The link to

submit on our website is http://www.cubesat.org/workshop-abstract. Abstracts should be under 500 words and should cover the ideas addressed and the objective of the presentation. Most importantly, any topic is welcome! The deadline for abstract submittal is DECEMBER 16, 2016.

Registration for the Workshop will be open shortly.
Registration costs are as follows:
Early Bird Professional (3 day pass/Banquet): $375
Professional (3 day pass/Banquet): $475
Student (3 day pass/Banquet): $150
Early Bird Professional (1 day pass): $160
Professional (1 day pass): $200
Please Note: The Early Bird Prices will end March 17, 2017.

Sponsorship: Available Soon!
If you are interested in demonstrating your support to the CubeSat Community? Gain exposure at the workshop, and help the Cal Poly CubeSat Program create an engaging workshop for representatives from industry and universities from around the world. Sponsorship opportunities will be available soon, and the CubeSat Workshop Team will send out an announcement as soon as they are ready.

Please contact cubesat.workshop (at) gmail.com with any questions.

[ANS thanks The CubeSat Workshop Team for the above information]

2017 Eastern VHF/UHF/Microwave Conference, Call for Papers

First call for papers and presentations

2017 Eastern VHF/UHF/Microwave Conference
April 21-23, 2017
Baymont Inn, Manchester, CT

Papers sought on all VHF and up activities:
Operating, Contests, Propagation, Antennas, Amplifiers, Low-noise Preamps, Homebrewing, Microwaves, EME, Arduinos, whatever you've been doing.

Plenty of time to write up your winter projects -
just take some pictures as you go.

Inquiries to w1ghz (at) arrl.net

[ANS thanks Paul Wade, W1GHZ via the Microwave List for the above information]

Call for Papers, 1st IAA Latin American Symposium on Small Satellites

We would like to invite you to contribute a paper for presentation at the 1st IAA Latin American Symposium on Small Satellites: Advanced Technologies and Distributed Systems, March 7 - 10, 2017, San Martín, Buenos Aires, Argentina.

Please send your abstract to mlapiana(a)unsam.edu.ar

By the January 20, 2017 deadline.

The International Academy of Astronautics' symposium is hosted by Colomb Institute (Universidad Nacional de San Martín and Comisión Nacional de Actividades Espaciales)

OBJECTIVE
To provide a forum for scientists, engineers, managers and students, to exchange information about small satellites. Topics will cover the technological state of the art and the planned and on-going programs and missions. It will have a worldwide vision, but focused on the needs and developments of Latin America, and it is open to a general view but with emphasis on advanced technologies and distributed platforms and payloads.

SESSIONS
- Small Satellites worldwide: achievements and trends.
- Small Satellites in Latin America: achievements and trends.
- Ongoing and projected Small Satellite projects with Latin American participation.
- Segmented architecture and Distributed Instruments.
- Small Satellite technologies.

ABSTRACT SUBMISSION
You are invited to contribute a paper for presentation at the Symposium. A one-page, single-spaced abstract of no less than 500 words is needed.

Student papers are encouraged.

For more detailed information, please visit the IAA website at:
http://iaaweb.org/content/view/670/882/

Or the Symposium website at:
http://www.unsam.edu.ar/institutos/colomb/IAA.asp

[ANS thanks the International Academy of Astronautics' Office for the above information]

Satellite Activation Dry Tortugas National Park

IOTA NEWS ... NA-079

Operators Rob/K2RWF and Craig/KD2INN will be active as W2LI from Dry Tortugas (NPOTA NP17, WW Grid EL84, WWF KFF-0023) between November 13-14th (1600z to 1700z).

They will be operating from the Dry Tortugas National Park.

Activity will be on 80-6 meters using SSB and the Digital modes (PSK and JT65/9). They will also attempt to work applicable satellite passes of SO50, AO85, FO29, AO73, and XW satellites. The group plans to work off of simple wire antennas, barefoot at 100 watts.

All logs will be uploaded to LoTW. QSL direct (please consider sending SASE that will fit a 4x6 card) for a special event QSL card via AJ2I. QSL via the Bureau for DX via AJ2I. For busted calls please contact AJ2I direct.

[ANS thanks Ohio/Penn DX Bulletin #1288 for the above information]

2016 AMSAT Space Symposium at Sea Register By Nov. 4

If you are an Individual attending Symposium on board the CARNIVAL LIBERTY departing Galveston, TX on November 10, you must register to attend the AMSAT Space Symposium & Annual Meeting through AMSAT. Cruise arrangements made through Carnival Cruise Lines does not include the registration fee for the Symposium itself.

There are three options to register for Symposium:

-Complete and mail to the AMSAT Office the 2016 Symposium Registration Form that was sent to all AMSAT members back in July along with the BoD ballot along with payment;

-Call the AMSAT Office (301-822-4376) and speak with AMSAT Office Manager Martha Saragovitz;

or

-Use the AMSAT Store (store.amsat.org) by selecting the “2016 AMSAT-NA Symposium Registration” link found under “Bestsellers” on the right hand side of the store’s main page.

Registration for the Symposium is $40.00 and includes a copy of the “Proceedings” that contains papers written for the Symposium as well as technical documentation that AMSAT is placing in the public domain. The “Proceedings” will be available to attendees onboard ship. In addition, the registration provides a means to confirm the number of individuals in your party planning to attend the AMSAT Banquet as well as an opportunity to reserve seats for the Field Ops Breakfast. Both meals are open to anyone wishing to attend (AMSAT Registration is not necessary) and there is no charge for either event as food is included in your cruise package. However, byindicating how many individuals will be attending, it helps to ensure that sufficient seating is made available for each activity.

As the AMSAT Office will not be open after Monday, 7 NOV 16 through that week, we ask that your Symposium Registration be received at the AMSAT office by Friday, 4 NOV 16.

[ANS thanks 2016 AMSAT Space Symposium Committee for the above information]

ARISS News

There were no scheduled contacts this past week.

Upcoming ARISS Contact Schedule as of 2016-10-25 03:30 UTC

Quick list of scheduled contacts and events:

Istituto Comprensivo “Marco da Melo”, Mel, Italy, direct via I3XFY
The ISS callsign is presently scheduled to be OR4ISS
The scheduled astronaut is Shane Kimbrough KE5HOD
Contact is a go for: Fri 2016-11-04 08:47:20 UTC

Students in Ingushetia, Russia, direct via TBD
The ISS callsign is presently scheduled to be RSØISS
The scheduled astronaut is Andrei Borisenko
Contact is a go for 2016-11-03 08:06 UTC

Exp. 49 on orbit. Welcome aboard!
Shane Kimbrough KE5HOD
Andrei Borisenko
Sergey Ryzhikov

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above information]

Satellite Shorts From All Over

+ Fall Edition of Radio Waves Now Available for Download

  The Fall 2016 edition of Radio Waves now is available. The ARRL publication focuses on news and articles of interest to educators and instructors.

  The fall issue announces the launch of the new Instructor Recognition Program. The article includes a link to a tutorial for instructors, explaining how the reporting and recognition system will work. A separate tutorial that explains the new management information features of the system is available on YouTube. Section Managers are encouraged to check this out.

  Other highlights of the fall issue are “Building Blocks Illustrate Basic Electronics,” “Ham Radio Flies High as Summer Camp at Kopernik Observatory,” an update on recent ARISS activities, Instructor Corner — News, Ideas, Support, ARRL Education & Technology Program news, and a report on the 2016 summer Teachers Institutes.

  To receive Radio Waves, register as an ARRL Instructor; http://www.arrl.org/license-instructor-registration, or Teacher; http://www.arrl.org/teacher-registration, or edit your personal profile, on the ARRL site, and select Radio Waves as one of your e-mail subscriptions.

  Download Radio Waves Fall 2016
  http://tinyurl.com/ANS304-RadiWaves-Fall2016

  Previous issues are at
  http://www.arrl.org/radio-waves

  [ANS thanks the ARRL for the above information]

+ White House initiative pushes for more tiny satellites

  NASA and other agencies are giving microsatellites the resources they need to thrive.

  Miniature satellites are increasingly a big deal, and for good reasons: they're not only less expensive and easier to deploy than the giant satellites of old, but can cover wider areas. And the White House wants to give them a helping hand. It's launching an initiative that will foster small satellites with the resources they need to flourish.

To start, NASA is not only proposing as much as $30 million toward purchasing data from these tiny vessels, but creating a Small Spacecraft Virtual Institute that will offer know-how to organizations.

A more direct effort has the National Geospatial-Intelligence Agency awarding Planet a $20 million contract for a fleet of small satellites that can capture images of "at least" 85 percent of the planet every 15 days.

Read the full story at
http://tinyurl.com/ANS304-WhiteHouse

[ANS thanks Stephen, G7VFY via Southgate ARN for the above information]

+ Achieving Science with CubeSats Available for Free Download

"Achieving Science with CubeSats; Thinking Inside the Box" by Committee on Achieving Science Goals with CubeSats; Space Studies Board; Division on Engineering and Physical Sciences; National Academies of Sciences, Engineering, and Medicine, ios available for download as a PDF.

Space-based observations have transformed our understanding of Earth, its environment, the solar system and the universe at large. During past decades, driven by increasingly advanced science questions, space observatories have become more sophisticated and more complex, with costs often growing to billions of dollars. Although these kinds of ever-more-sophisticated missions will continue into the future, small satellites, ranging in mass between 500 kg to 0.1 kg, are gaining momentum as an additional means to address targeted science questions in a rapid, and possibly more affordable, manner. Within the category of small satellites, CubeSats have emerged as a space-platform defined in terms of (10cm x 10cm x 10cm)- sized cubic units of approximately 1.3 kg each called “U’s.”

Historically, CubeSats were developed as training projects to expose students to the challenges of real-world engineering practices and system design. Yet, their use has rapidly spread within academia, industry, and government agencies both nationally and internationally.

One needs to register with NAS but register once and all the NAS publications are available for PDF download -- they send out a monthly list of new publications.

Register and Download Achieving Science with CubeSats:
http://tinyurl.com/ANS304-ScienceWithCubesats

[ANS thanks Tom K3IO for the above information]

+ YouTube Video, Gaston Bertels ON4WF, Talks about ARISS Milestones

Gaston Bertels ON4WF, Talked about ARISS Milestones during the 6th Polish-wide Conference of Contributors and Sympathizes of ARISS. A YouTube video of the address can be found at:
https://www.youtube.com/watch?v=ufuyki21G6M

[ANS thanks Armand SP3QFE for the above information]

+ Before MARS, a Prequel to National Geogrphic's Series MARS

National Geographic released the first trailer for the fall release of its ambitious new event series today, MARS. The hybrid, scripted docuseries will be a six-part story about colonizing the red planet.

The trailer begins with an appropriately moody narration by a woman over the image of an Earth, and as the camera pulls back, we see it's a depiction of Earth on a spaceship named Daedalus, after the mythological Greek craftsman who created wings for his son, Icarus. As the CGI ship veers into the crimson orbit of Mars, their mission is revealed: to make the planet a new home.

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There is currently no release date for the Before Mars prequel series.

The video can be viewed via YouTube at:
https://youtu.be/mPuTlZYDbh4

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, AA8EM)
aa8em at amsat dot org